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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/822,126	04/09/2004	Takeshi Yano	IS8-047	2459

21567 7590 04/11/2007
 WELLS ST. JOHN P.S.
 601 W. FIRST AVENUE, SUITE 1300
 SPOKANE, WA 99201

EXAMINER

FRISTOE JR, JOHN K

ART UNIT	PAPER NUMBER
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3753

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/11/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/822,126

Applicant(s)

YANO ET AL.

Examiner

John K. Fristoe Jr.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 January 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) 2-4 and 10-12 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 5, 9 and 13-16 is/are rejected.
- 7) ☒ Claim(s) 6-8, 17 and 18 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. Applicants' arguments filed 1/31/2007 have been fully considered but they are not persuasive. Applicants argue that Boecking does not disclose the displacement enlarging mechanism, the valve body, and the piezoelectric element mechanically connected to one another, the examiner disagrees. The piezoelectric element (2) is mechanically connected to the displacement-enlarging element (10) via the mechanical contact between element (8) and element (10) in figure 1. The displacement-enlarging element (10) is mechanically connected to the valve body (15) via the mechanical contact between element (10) and element (15) in figure 1. Therefore the displacement enlarging element (10), the piezoelectric element (2), and the valve body (15) of Boecking are mechanically connected via each other. Applicants then argue that the resetting force of the piezoelectric actuator of Boecking does not close the valve, the spring closes the valve, the examiner disagrees. The spring does assist in closing the valve, however the valve is allowed to close because of the resetting force of the piezoelectric actuator. Therefore the valve body is closed via the resetting force of the piezoelectric actuator. Since any changes to the grounds of rejection were necessitated by Applicants' amendment, the instant Office action has been made final.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who

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has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3. Claims 1, 5, 9, and 13-18 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Pat. No. 6,776,390 (Boecking). Boecking discloses a piezoelectric valve comprising a valve main body (portion of element 1 adjacent element 15 in figure 1), a pressure chamber (chamber containing element 16 in figure 1), an outlet (21), a valve body (15), a piezoelectric element (2), at least one displacement enlarging mechanism (10, 11) comprising a hinge (adjacent element 11 in figure 1) and an arm (10), wherein the piezoelectric actuator (2) and the displacement enlarging mechanism (10) are mechanically connected (via element 5), wherein the valve body (15) is opened by applying voltage to the piezoelectric element (col. 4, lines (1-16)), a valve seat (17), a base plate (portion of element 1 adjacent element 12 in figure 1), and wherein the mechanical connection between the arm member (10) and the valve body (15) comprises a spring (14).

Regarding the recitation of "air" with the claims, the examiner does not consider this term to limit the claim since any type of fluid can be controlled by a valve.

Regarding the recitation of “a granular material sorting machine” in the preamble of claim 1, the examiner does not consider this term to breath life and meaning into the claim since the structure is not referred back to in the body of the claim.

Allowable Subject Matter

4. Claims 6-8, 17, and 18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John K. Fristoe Jr. whose telephone number is (571) 272-4926. The examiner can normally be reached on Monday-Friday, 7: 00 a.m-4: 30 p.m.

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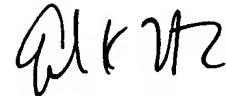
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eric S. Keasel can be reached on (571) 272-4929. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JKF



ERIC KEASEL
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700



John K. Fristoe Jr.
Examiner
Art Unit 3753